

Wheat Soy Milk

Wheat Soy Milk (WSM) is a blended, fortified, processed commodity and is a source of high quality energy, protein, minerals, and vitamins. WSM requires cooking before consumption. WSM can be used as a high quality nutrient supplement for all age groups. It is particularly suitable as a complementary food for infants over six months (assuming exclusive breastfeeding until six months) and for young children. It can be used in MCH programs, in blanket and selective feeding programs, and as a part of a general ration. When used as a primary food source for young children, vegetable oil and/or sugar should be added to the blended food to increase the energy content and improve the taste. In general, lactose intolerance is unlikely to result from consumption of WSM. For more information on the physiologic appropriateness of blended, fortified commodities containing NFDM, refer to Part Two of the CRG.

1. NUTRITIONAL VALUES (per 100 g)

These are average values, calculated from nutritive data for Wheat Soy Blend (WSB), bulgur, and Non-Fat Dry Milk (NFDM), as listed on the U.S. Department of Agriculture, Agricultural Research Service (USDA:ARS) 2001 USDA Nutrient Database, Release 14, Laboratory Home Page, (www.nal.usda.gov/fnic). These nutrient values are provided as a guide for use in the calculation of food aid rations; users should be aware that shipments of food aid may vary from these exact nutrient values.

2. COMPONENTS

62.8%	Wheat fractions, total	
45.6%	a. Bulgur flour	
17.2%	b. Wheat protein concentrate	Enzyme inactivated
	Or	
32.7%	a. Straight grade flour	Cooked
30.1%	b. Wheat protein concentrate	Enzyme inactivated
15.0%	Soy flour	Defatted, toasted
15.0%	Non-fat dry milk	Spray process
4.3%	Soybean oil	Refined, deodorized, stabilized
2.8%	Minerals	
0.1%	Vitamin premix	

3. SPECIFICATIONS

WSM shall conform in every respect to the provisions of the "Federal Food, Drug, and Cosmetic Act," as amended, and the regulations promulgated thereunder, including any Defect Action Level guidelines issued by the Food and Drug Administration (FDA) which may be applicable to WSM (See Table next page).

Nutrient	Amount	Unit
Water	7.92	g
Energy	357.50	Kcal
Protein	25.08	g
Total Lipid	5.82	g
Carbohydrate	43.31	g
Fiber, total dietary	10.44	g
Ash	2.96	g
Calcium	1030.55	mg
Iron	17.90	mg
Magnesium	219.16	mg
Phosphorus	394.20	mg
Potassium	901.60	mg
Sodium	91.50	mg
Zinc	5.83	mg
Copper	0.96	mg
Manganese	1.75	mg
Selenium	5.80	mcg
Vitamin C	41.02	mg
Thiamin	0.60	mg
Riboflavin	0.73	mg
Niacin	8.33	mg
Pantothenic acid	4.09	mg
Vitamin B-6	0.48	mg
Folate	260.00	mcg
Vitamin B-12	1.60	mcg
Vitamin A ¹	2328.40	IU
Vitamin E	8.27	mg-ATE
Vitamin D	247.80	IU
Iodine	56.88	mcg

¹For conversion of vitamin A content to Retinol Equivalents, 1 IU = 0.3µg.

CHEMICAL AND PHYSICAL REQUIREMENTS

ITEM	REQUIREMENT	
	Minimum	Maximum
Moisture, %	--	9.5
Protein (Nx6.25), %	20.0	--
Crude Fat, %	6.0	--
Ash, %	--	6.6
Crude Fiber, %	--	2.5
Lysine, %	0.9	--
Material that will pass through U.S. Standard No. 70 woven-wire-cloth sieve, %	97.0	--
Total Bacteria Count, per gram	--	50,000
Salmonella and E. Coli will be negative		

(Source: USDA: FSA: PDD EOB March 2002. Contact 202-690-3565)

4. PACKAGING

For shipments to Africa, packaging will generally consist of 25 kg. high performance paper bags. For destinations other than Africa, standard 25 kg. paper bags with multi-wall paper lining will be provided.

5. SHELF LIFE

The shelf life and Best if Used By Date (BUBD) for WSM are not available. See “Section III: Storage/Shelf Life Specifications” for more information.